

In the Claims

Please cancel claims 21 and 22, without prejudice

1. (original) An ultrasound contrast agent comprising an injectable oil-in-water emulsion wherein there are heterogeneous gas-containing nucleation sites associated with droplets of the dispersed oil phase.

2. (original) A contrast agent as claimed in claim 1 wherein the nucleation sites are present within dispersed oil phase droplets.

3. (original) A contrast agent as claimed in claim 2 wherein the nucleation sites comprise free gas microbubbles, surfactant- or lipid-stabilised gas microbubbles, polymer- or protein-encapsulated gas microbubbles, gas-containing porous solid microparticles, gas-containing rough-surfaced solid microparticles, gas-containing polymeric microparticles, or gas-containing fullerenes, clathrates or nanotubes.

4. (original) A contrast agent as claimed in claim 1 wherein nucleation sites are present within membranes stabilising the dispersed oil phase droplets or in contact with the outside of such membranes.

5. (previously amended) A contrast agent as claimed in claim 1 wherein the oil phase comprises one or more components selected from aliphatic ethers, polycyclic oils and alcohols, heterocyclic compounds, aliphatic hydrocarbons, cycloaliphatic hydrocarbons and halogenated hydrocarbons, said component(s) having a boiling point not exceeding 60EC.

6. (original) A contrast agent as claimed in claim 5 wherein the oil phase comprises one or more perfluorocarbons.

7. (original) A contrast agent as claimed in claim 6 wherein said perfluorocarbon is selected from perfluorobutanes, perfluoropentanes, perfluorohexanes, perfluorocyclobutane, perfluorodimethylcyclobutanes, perfluorocyclopentane, perfluoromethylcyclopentane, perfluorobutenes, perfluorobutadienes, perfluoropentenenes, perfluorohexenes, perfluorocyclopentene, perfluorocyclopentadiene and perfluoro-*t*-butanol.

8. (previously amended) A contrast agent as claimed in claim 1 wherein the oil phase contains a gaseous solute.
9. (original) A contrast agent as claimed in claim 8 wherein the oil phase comprises air, oxygen or carbon dioxide dissolved in a liquid fluorocarbon.
10. (previously amended) A contrast agent as claimed in claim 1 wherein the dispersed oil phase droplets are stabilised by a surfactant selected from fatty acids, carbohydrate and triglyceride esters of fatty acids, phospholipids, proteins, block copolymer surfactants, fluorine-containing surfactants and cationic surfactants.
11. (previously amended) A contrast agent as claimed in claim 1 wherein the dispersed oil phase droplets are stabilised by polymeric wall-forming encapsulating material or by incorporation into porous latex particles.
12. (previously amended) A contrast agent as claimed in claim 1 wherein the oil phase has a boiling point not exceeding 42EC.
13. (original) A combined preparation for simultaneous, separate or sequential use as a contrast agent in ultrasound imaging, said preparation comprising:
- i) a contrast agent as claimed in any of the preceding claims, and
 - ii) a vasodilator drug.
14. (original) A combined preparation as claimed in claim 13 wherein said vasodilator drug is adenosine.
15. (previously amended) A drug delivery agent comprising a contrast agent as claimed in Claim 1 together with a therapeutic drug.
16. (original) A drug delivery agent as claimed in claim 15 wherein a hydrophobic drug is dissolved in the oil phase.
17. (original) A drug delivery agent as claimed in claim 15 wherein the drug is present as nano- or micro-sized particles.

18. (previously amended) A method of generating enhanced images of a human or non-human animal subject which comprises the steps of injecting a contrast agent as claimed in claim 1 into the vascular system of said subject and generating an ultrasound image of at least a part of said subject.

19. (original) A method as claimed in claim 18 wherein microbubble growth from the contrast agent is activated within the subject by application of external activation.

20. (original) A method as claimed in claim 19 wherein said external activation comprises ultrasound irradiation.

21. (cancelled) Use of a contrast agent as claimed in claim 1 in ultrasound therapy.

22. (cancelled) Use as claimed in claim 21 wherein said therapy involves cell killing or blocking of blood flow to a site of interest.